

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: HYEON-YONG JANG)
Serial No.: 10/799,823) Group Art Unit: 2629
Filed: March 12, 2004)
Examiner: TRAN, MY-CHAU T.)
For: DEVICE AND METHOD OF DRIVING) Confirmation No.: 8366
LIGHT SOURCE IN DISPLAY DEVICES)

PRE-APPEAL BRIEF REQUEST FOR REVIEW

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Commissioner for Patents
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In response to the Final Office action mailed May 14, 2007, and in conjunction with the Notice of Appeal filed concurrently herewith, the Applicant submits the following remarks in support of the Pre-Appeal Brief Request for Review:

REMARKS

Claims 1-21 are pending in the present application. No claims have been amended; leaving claims 1-21 for further consideration. No new matter has been introduced by these remarks. Claims 1-18, 20 and 21 stand rejected. Claim 18 stands objected to, but the Examiner states it would be allowable if rewritten in independent form including all of the limitations of the base claim on which it depends. Reconsideration and allowance of the claims is respectfully requested in view of the following remarks.

Claim Rejections under 35 U.S.C. § 112

Claims 1-16 stand rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the written description requirement. Applicant respectfully traverses for at least the following reasons.

First, Applicant respectfully suggests that there is support in at least the specification and drawings as originally filed for a voltage supplying unit. Specifically, the claimed invention is clearly an emissive-type display device, as the claimed invention has a backlight unit (see page 6, lines 8, 15 and 18 as well as FIG. 1 [backlight unit 340] and FIG. 2 [lamp unit 910] of the application as filed). Furthermore, the lamps (item 341 of FIG. 1 in the application as filed) are distinctly disclosed as being emissive-type lamps, e.g., cold cathode fluorescent lamps, external cathode fluorescent lamps or light emitting diode lamps (page 6, lines 21-22 of the application as filed), and thus require power to drive them. Additionally, the lamp unit (FIG. 2, item 910 of the application as filed) is supplied with a lamp current LDS, implying that a source, i.e., the voltage supplying unit disclosed in claim 1, supplies the lamp current LDS. More specifically, in an exemplary embodiment of the present invention shown in FIG. 4 (items 910 and 921) and described in the specification at page 11, lines 18 and 21-22, the voltage supplying unit is a transformer 921 driving the lamp unit 910 with the lamp current LDS.

In the Advisory action dated August 3, 2007, the Examiner states that the oscillator 940 supplies a voltage to the controller 930, which is then connected in series with the switching unit 922 and the transformer 921 and therefore the transformer 921 can not be a voltage supplying unit. However, as described above, the transformer 921 supplies the lamp current LDS to the lamp unit 910; the voltage VDDA supplied by the oscillator 940 to the controller 930 is a different voltage than that supplied to the lamps by the transformer 921.

Second, Applicant respectfully suggests that there is support in at least the specification and drawings as originally filed for the voltage supplying unit...to apply AC voltage. In particular, the transformer 921 in FIG. 4 in the application as filed, which is an example of a voltage supplying unit according to one exemplary embodiment of the present invention, generates “a sinusoidal signal,” e.g., an AC voltage, which is provided to the lamp unit as the lamp current LDS, as disclosed at page 13, lines 21-23 of the instant application as filed. Further support is found for this contention in FIG. 5 (item LDS), wherein the lamp current LDS is clearly an alternating current, e.g., a sinusoidal signal having positive and negative amplitudes a and b, respectively, which are of substantially the same value (i.e., magnitude) (page 13, lines 25-26 of the application as filed).

Third, Applicant respectfully suggests that there is support in at least the specification and drawings as originally filed for the AC voltage...synchronized with the modulated signal. Specifically, the instant application as filed discloses on page 13, lines 19-24 that the transformer, e.g., the voltage supplying unit, generates the sinusoidal signal (as described above) based on the on/off signal SW, i.e., the modulated signal. Further, referring to FIG. 5 (item LDS) of the application as filed, the positive and negative cycles of the lamp current LDS clearly correspond to positive and negative pulses of the signal SW, i.e., the signals LDS and SW are synchronized.

Finally, Applicant respectfully suggests that there is support in at least the specification and drawings as originally filed for the AC voltage being applied...to the light source so as to drive the light source. As described above, the inverter having the transformer, i.e., the voltage supplying unit according to an exemplary embodiment of the present invention, “drives the lamp unit” (page 11, line 18 of the application as filed). Further, FIG. 2 (items 900, 910 and 920) of the application as filed shows the lamp current LDS being supplied to the lamp unit 910.

In summary, Applicant respectfully submits that there is support in at least the specification and drawings as originally filed for the limitation “voltage supplying unit (transformer) to apply AC voltage (sinusoidal signal) synchronized with the modulated signal (signal SW and lamp current LDS are synchronized) to the light source (lamp unit/lamps) so as to drive (transformer drives the lamp unit) the light source” in claim 1.

Thus, Applicant respectfully submits that independent claim 1 and claims 2-16 depending therefrom are described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention. Accordingly, it is respectfully submitted that the rejection of claims 1-16 under 35 U.S.C. § 112, first paragraph, be withdrawn.

Claim Rejections Under 35 U.S.C. § 103

Claims 17-18 and 20-21 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Tanaka et al. (U.S. Patent No. 6,011,534, hereinafter “Tanaka”) in view of Jefferson (U.S. Patent No. 6,127,865, hereinafter “Jefferson”). The Examiner states that Tanaka discloses all of the elements of claims 17 and 18. Applicant respectfully traverses for the reasons set forth in pages 8-10 of the Response to Final Office action dated July 16, 2007.

Briefly, Applicant asserts that Tanaka does not teach or suggest: providing a driving signal to the light source in response to the adjusted reference signal as in original claim 17 of the application as filed.

On page 3 of the Final Office action and pages 5 and 6 of the Advisory action, the Examiner has likened the pixel electrode of Tanaka to the light source of the present invention, an analogy which the Applicant respectfully disagrees with.

It is further respectfully noted that there is no teaching or suggestion in Jefferson to supply a driving signal to the light source in response to the adjusted reference signal, as in original claim 17 of the application as filed.

Thus, Applicant respectfully submits that claim 17, and claims depending therefrom, i.e., claims 18-21, of the present invention are patentable over the cited references. Accordingly, it is respectfully submitted that the rejection of claims 17-18 and 20-21 under 35 U.S.C. § 103(a) be withdrawn.

Claims 1 and 9 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Tsunoda et al. (U.S. Patent No. 5,912,713, hereinafter “Tsunoda”) in view of Kang (U.S. Patent Application Publication No. 2004/0004596 A1, hereinafter “Kang”). The Examiner states that Tsunoda discloses all of the elements of claim 1 except, *a voltage supplying unit to apply AC*

voltage synchronized with the modulated signal to the light source so as to drive the light source, which the Examiner further states is disclosed primarily in Kang. Applicant respectfully traverses for the reasons set forth in pages 10-12 of the Response to Final Office action dated July 16, 2007.

Briefly, neither Tsunoda nor Kang teach or suggest a controller to modulate the reference signal in response to the control signal and output a modulated signal, as in claim 1 of the present invention. More specifically, Applicant respectfully submits that the Examiner's allegation that the selector (item 26 in FIG. 3 of Tsunoda) teaches the "controller to modulate the reference signal in response to the control signal and output a modulated signal" of claim 1 in the instant invention is incorrect, in that (referring to FIG. 3 of Tsunoda) the selector is incorrectly disposed, both physically and electrically, to teach the controller disclosed in claim 1 (item CTN in FIG. 4 in the application as filed).

Kang fails to cure the defects of Tsunoda with respect to the abovementioned claims.

Thus, Applicant respectfully submits that claim 1 and all claims depending therefrom, i.e., claims 2-16, and, more specifically, claim 9 of the present invention are patentable over the cited references. Accordingly, it is respectfully submitted that the rejection of claims 1 and 9 under 35 U.S.C. § 103(a) be withdrawn.

Conclusion

For the above stated reasons, it is respectfully submitted that the final rejection of claims 37-67 is in error and that the same are allowable over the art of record. The fee set forth in 37 CFR 41.20(b)(1) is enclosed herewith. However, if any fees are due with respect to this submission, please charge them to Deposit Account No. 06-1130 maintained by Applicant's attorneys.

Respectfully submitted,
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